

From qrp-1@lehigh.edu Tue May 30 00:23:49 1995
Message-Id: <Pine.SUN.3.90.950529171645.25496B-1000000@nimbus>
From: Monte Stark <ku7y@sage.dri.edu>
Subject: 30-40
Date: Mon, 29 May 1995 20:23:49 EDT

Just a quick note...

Opened the bag of parts for the 30-40 at 1320. Soldered the last connection at 1644. Plenty of wire for the coils, all the parts were there. No extra and nothing short.

Good quality board. Followed the picture for placing the parts. The parts list gives the value and how the parts are marked. Makes it easy to find the right part.

Does it work? Well, I don't know yet. Am just taking a break. Should have it up and running soon.

Good job Dave. cul,

73, Ron, dah, dah (I'm three times slower than Chuck)

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....
....ku7y@sage.dri.edu.....Sun Valley, Nevada....
.....ARRL.....NorCal #330.....NRA LIFE.....

From qrp-1@lehigh.edu Tue May 30 04:08:38 1995
Message-Id: <Pine.SUN.3.90.950529210345.26151A-1000000@nimbus>
From: Monte Stark <ku7y@sage.dri.edu>
Subject: 30-40
Date: Tue, 30 May 1995 00:08:38 EDT

Well, it works!

Gotta remove one turn to get it up in freq. It came out at 10.095 max.

Full 1.5w out long before getting to the end of the adjustment.

Now to get it done and in a box..... cul,

73, Ron, dah, dah (I'm three times slower than Chuck)

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....

....ku7y@sage.dri.edu.....Sun Valley, Nevada....
.....ARRL.....NorCal #330.....NRA LIFE.....

From qrp-1@lehigh.edu Mon May 29 13:40:20 1995
Message-Id: <Pine.D-G.3.91.950529093348.21168A-100000@romulus.ncsc.mil>
From: "Harold J. Kohl" <kohl@romulus.ncsc.mil>
Subject: Re: 30M exchange
Date: Mon, 29 May 1995 09:40:20 EDT

Why not let the GRID SQUARE, LAT LOG, OR ZIP CODE part of the text and included only if the participant wants. I keep seeing statements that this is fun. Keep it simple with RST, NAME, POWER, and QTH. The rest of the information is optional. I think most of the QRPers will include QTH because they want the best mile for the watt. John K04A.

On Sun, 28 May 1995, Alan Kaul wrote:

> Hi Gang, reports beginning to trickle in on type of exchange for 30M ..
> don't make it too complicated, etc., some said. Still waiting to hear
> from Chuck, who suggested compiling log data based on path distance.
> One person suggested adapting a lat-long program to zip
> codes!!! Maybe that is the solution -- what would you say to exchanging
> ZIP CODES?? Someone else said GRID SQUARES -- how about that? Zip codes
> would be 5-numbers -- and Grid Squares would be 2-letters and
> 2-numbers. But, of course with Grid Squares, you could figure path
> distance within a few miles but without external data, Grids can be
> calculated -- but with Zip Codes it would require an external database.
> A lower tech solution may also be at hand -- we're exchanging ARRL
> sections, could that be close enough for our purposes??
>
> Any thoughts???
> 72/73 de Alan
>
>
> [Alan Kaul, W6RCL] kaul@netcom.com
>
>
>

From qrp-1@lehigh.edu Mon May 29 21:00:40 1995
Message-Id: <950529165949_16610033@aol.com>

From: N5EM@aol.com
Subject: Re: 30M exchange
Date: Mon, 29 May 1995 17:00:40 EDT

Group:

I highly agree with Grid Square. Four digit G/S is easy to find, however, 6 digit G/S narrows down to about a 4 x 3 mile rectangle, if I recall. I like 6 digit if you are interested in miles/watt and the like. Four digit is probably not accurate enough for certificates, but would be fine for our study. If you don't know your grid square, it's pretty easy to find out.

ARRL has a nice map for keeping track of squares worked. Used mostly for VHF/UHF, but provides a better locator than ARRL Section. South Texas, for example, is a pretty big place.

72
Ed

From qrp-1@lehigh.edu Mon May 29 23:46:47 1995
Message-Id: <199505292345.SAA19380@chuck.dallas.sgi.com>
From: adams@chuck.dallas.sgi.com (chuck adams)
Subject: 30M Propagation Study
Date: Mon, 29 May 1995 19:46:47 EDT

Gang,

Let's not make this difficult. All you need is QTH (city,state). We can do the distance calculation later. We don't need grids, we don't need long/lat, I'll show you how to get the distance via internet email. Well all the data you need anyway.

dit dit de k5fo/3

--

Chuck Adams K5FO CP-60 adams@sgi.com

From qrp-1@lehigh.edu Tue May 30 00:17:48 1995
Message-Id: <Pine.SUN.3.90.950529171332.25496A-100000@nimbus>
From: Monte Stark <ku7y@sage.dri.edu>
Subject: Re: 30M Propagation Study

Date: Mon, 29 May 1995 20:17:48 EDT

I agree with Chuck,

Lets keep things simple. The idea is to get some activity on 30m. Much more fun to chat with someone than get a number.

Gee, maybe the qso should have to last 15 min before it can count?

: -)

73, Ron, dah, dah (I'm three times slower than Chuck)

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....
....ku7y@sage.dri.edu.....Sun Valley, Nevada....
.....ARRL.....NorCal #330.....NRA LIFE.....

From qrp-l@lehigh.edu Tue May 30 00:36:57 1995
Message-Id: <Pine.3.89.9505291757.A9170-0100000@netcom12>
From: patrick cook <kb0oxd@netcom.com>
Subject: Re: 30M Propagation Study
Date: Mon, 29 May 1995 20:36:57 EDT

Hi Gang:

On Mon, 29 May 1995, Monte Stark wrote:

> I agree with Chuck,
>
> Lets keep things simple. The idea is to get some activity
> on 30m. Much more fun to chat with someone than get a
> number.
>
> Gee, maybe the qso should have to last 15 min before it
> can count?
>
> : -)

I have a better idea, instead of just chatting and gathering information about grid squares and the like, why not have a net of some kind devoted EXCLUSIVELY to QRPing????

You NEVER know just how many SWLers there are out there!!!!!!

73's for now, my friends!

DE KB00XD

From qrp-1@lehigh.edu Mon May 29 14:39:41 1995
Message-Id: <950529103807_15687555@aol.com>
From: Byron8LCZ@aol.com
Subject: Contest Results
Date: Mon, 29 May 1995 10:39:41 EDT

ARCI QRP CW HOOT OWL SPRINT - May 28th

Right at the start of the contest, Thunder Boomers rolled into the Detroit area. At first I tried listening around the static crashes looking for contesters, but the thunder grew louder. So with no signals heard, I turned off the rig and unplugged the antenna. The Gap Titan is 25 ft long and sits on a chimney at 12 ft., with a total height of 37 ft. It looks like a giant lightning arrestor. I didnt want to find out how effective it was. At the start of the 2nd hour, everything quieted down and a constant rain fell. All of a sudden, like someone throwing a switch, QRP signals started comming in. I made 9 QSO's that hour, could have made more except for the QSB. The 3rd hour, signals got weaker and the noise level came up, only made 7 QSO's. And by the 4th hour, noise levels were higher and very few signals were strong enough to copy. Many of these QSO's were made through extreme patience and many repeats of info. Either many were using 1 watt or the band was just in terrible shape, or both. RST's didnt mean much either. One guy was S7 but difficult to copy, due to high noise levels and static crashes.

My best DX contacts were Pete W6ZH in Calif at 11:20 pm local time on 40 meters and Rick VE6GK in Alberta at 10:13 pm local on 20 meters. It was not the best of nights for a QRP contest. I think the solar flux was around 67, but the local storm was the real villan last night. Just wait till next year.....

To summarize: 6 QSO's on 20m and 15 QSO's on 40m. Heard nothing on 80m and 15m. For a total of 21 QSO's and 19 S/P/C multipliers.

The station: QRP Plus xcvr running 5 watts out and a Gap Titan 80-10m vertical at 12 ft.

QRP-L members worked: NM1J Scott, VE6GK Rick, N2CX Joe, W03B Bob and W6ZH Pete.

How did the rest of you guys do last night ?

72, Byron WA8LCZ Detroit Byron8LCZ@aol.com

From qrp-1@lehigh.edu Tue May 30 04:01:40 1995
Message-Id: <9505300401.AA56591@tuba.aix.calpoly.edu>
From: rheiss@tuba.aix.calpoly.edu
Subject: Contests Report
Date: Tue, 30 May 1995 00:01:40 EDT

As of Friday I had a 15 Meter delta loop up 30 feet. Forty sounded much quieter than usual on the sloping dipole due to a severed feedline. Friends don't let friends do gardening drunk! Propagation was not favoring 15, so (during WPX) I soldered a splice into the bad cable and replaced the loop with a dipole for 20 Meters. The rig was an Argo 509 adjusted for 3 watts output, with a homebrew power supply and a homebrew keyer based on the Hayward and DeMaw design. Rather than using a computer, I elected to practice the manual skills, with portable operation in mind for later this summer.

WPX is a bizarre contest where having a prestigious, old-fashioned call sign is a disadvantage. The rules printed in QST did not seem to match what I heard on the air; after a couple of dreaded QS0B4 replies I caught on, merged my dupe sheets, and quit pestering the US stations who all seemed to be beaming Europe anyway. I didn't hear any DX workable on 15 or 20 meters, but to my surprise it was possible to work Asia and South America on 40 during the early morning hours. The five strongest Japanese and a 4M2 were very loud and seemed hungry to work anyone; they were logged without any fuss. Mustering a little ambition, I tentatively sent my call, twice at 22 WPM, toward a lonely RA0 who was barely S9 and got "QRZ? PSE AGN" response. After about three minutes we had a letter perfect exchange! I tried some of the weaker Japanese and managed to complete a contact with four of them. The total was 87 contacts, mostly on 40 Meters.

I also checked into the WSN this weekend for the first time, with an invitation from a regular I had a ragchew with last week. They were so friendly and relaxed, in contrast to the WPX contesters.

The Hoot Owl was a hoot, of course. There were 6 contacts on 20 and 9 on 40 Meters, in spite of noisy conditions and a tired op on this end. I also heard AB5WB Andy and others but didn't work everyone, sorry. Some notable calls in the log: AB5OU Tim, VE6GK Rick, W07T Mark, KB7WW Arthur, W7Z0I for whom I sent gibberish with the keyer, NA5N Paul, and

KL7/DL8WEM who was kind enough to call me from Fairbanks!

73, Rob K06KA
rheiss@tuba.calpoly.edu

From qrp-1@lehigh.edu Tue May 30 03:08:24 1995
Message-Id: <Pine.SUN.3.91.950529210827.8897C-1000000@ume>
From: Rick Zabrodski <zabrodsk@med.ucalgary.ca>
Subject: foxx mini transiever question
Date: Mon, 29 May 1995 23:08:24 EDT

I feel like I am ten years behind everybody, reading about Pixie's while
I put together the "semiconductor classics or yesteryear" ;-)

Anyway, my question: The headphones/earphones: high or low impedance!
(I have all the parts in an soldered, about to do the external connections)
Thanks!

Dr. Rick Zabrodski BSc, MD, CCFP(E)	*	VE6GK
Email: zabrodsk@med.ucalgary.ca	*	NorCal 519 ARCI 7650 GQRP 8329
Phone 403-271-5123 Fax 403-225-1276	*	"Power is no substitute for skill"

From qrp-1@lehigh.edu Mon May 29 23:47:59 1995
Message-Id: <199505292346.SAA19386@chuck.dallas.sgi.com>
From: adams@chuck.dallas.sgi.com (chuck adams)
Subject: Holiday Inn
Date: Mon, 29 May 1995 19:47:59 EDT

Ooops. Room 918 if they can't find my name.

--

Chuck Adams K5FO CP-60 adams@sgi.com

From qrp-1@lehigh.edu Tue May 30 00:35:34 1995
Message-Id: <Pine.3.87.9505291757.A24136-01000000@agora.rdrop.com>

From: Art Moe <artmoe@agora.rdrop.com>
Subject: Hoot Owl Sprint
Date: Mon, 29 May 1995 20:35:34 EDT

First thanks to all for the Q's

score 19 q's SPC 8

Got home about 1/2 hour after the start and found 20 almost gone
did get 2 q's on 20 the rest on 40. Will do antenna work this summer.

73's

Arthur Moe Oregon City, Or
A.R.S. KB7WW 45-19-22 N 122-36-37 W CN85
artmoe@agora.rdrop.com At the end of the Oregon Trail

From qrp-1@lehigh.edu Tue May 30 04:40:12 1995
Message-Id: <Pine.SUN.3.91.950529223544.13395B-1000000@ume>
From: Rick Zabrodski <zabrodsk@med.ucalgary.ca>
Subject: hoot owl sprint
Date: Tue, 30 May 1995 00:40:12 EDT

Worked 20 and 40 (tried 80 and 15 but heard nothing)
5 watts, icom 751a with audio dsp (I needed it on 40)
Actually had a few pileups.
Sorry for the guys that I knew were calling but could not pull through...
tried everything including turning off the agc etc.

39 qs, 18 spc total: 19908

Observations: you could tell when it was 2000 hrs in california!

Just had a half hour rag chew this pm with a z12...my sig 54 with 10
watts to his 59 with 400. Reminded me of the good ole days.
(Just got my CQ WW CW QRP First place award for 1993....remember 10 meters?)
I think this 4 hour stuff is a lot more sane BTW. Had fun!

Oh yea, antennas: 20 m monobander at 65 ' with inverted vee just below.

Dr. Rick Zabrodski BSc, MD, CCFP(E) * VE6GK
Email: zabrodsk@med.ucalgary.ca * NorCal 519 ARCI 7650 GQRP 8329
Phone 403-271-5123 Fax 403-225-1276 * "Power is no substitute for skill"

From qrp-1@lehigh.edu Mon May 29 23:43:45 1995
Message-Id: <199505292342.SAA19369@chuck.dallas.sgi.com>
From: adams@chuck.dallas.sgi.com (chuck adams)
Subject: K5F0/3
Date: Mon, 29 May 1995 19:43:45 EDT

Gang,

I've changed hotels. I've moved from Georgia Ave. to
Holiday Inn just off I95 north of 495 at Calvert Exit.

I'm in the office and don't have the phone number there,
it's in the 301 area code.

I'll be in lobby starting at 6:15pm Tuesday. If you
get there late, I'll leave word at front desk where we
went. It won't be far away. I'll post Tuesday morning
more information.

I had 150 messages when I logged on a few minutes ago.

: -)

dit dit K5F0/3

--

Chuck Adams K5F0 CP-60 adams@sgi.com

From qrp-1@lehigh.edu Mon May 29 18:19:04 1995
Message-Id: <199505291814.0AA21704@brutus.bright.net>
From: "Bill Kelsey - N8ET - Kanga US" <kanga@brutus.bright.net>
Subject: Kanga Catalog now on-line (with Pictures)
Date: Mon, 29 May 1995 14:19:04 EDT

I finished up the new version of the Kanga US catalog this weekend,
and it is on my home page:

<http://ncc1701-d.cc.nd.edu/kanga/>

For those of you without Web access - it will be available via FTP from Lehigh in the next few days...

The Hands portion of the catalog has some schematics and block diagrams. If they work out, I will put some out there for the Kanga kits also - let me know.

Mni Tnx to N8HSC for use of his WWW server!

73 - Bill Kelsey - N8ET

Kanga US

kanga@bright.net

419-423-4604

[HTTP://ncc1701-d.cc.nd.edu/kanga/](http://ncc1701-d.cc.nd.edu/kanga/)

From qrp-1@lehigh.edu Tue May 30 03:50:35 1995

Message-Id: <1995May29.234907.4982@wb3ffv.ampr.org>

From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)

Subject: More on WM1 problem

Date: Mon, 29 May 1995 23:50:35 EDT

After my comments on the WM1 wattmeter problem I received two private replies, and I suggested that both repost them to the whole list. One told me he later did that himself, but the other had no copy left and authorized me to do it for him:

Message 62/72 from Glen Leinweber Monday, May 29, 1995

Subject: Re: Re problems with WM1 wattmeter

[some quoted text deleted]

Mike, I built up the W7EL wattmeter in the handbook, with a few mods of course. There are some very nice op-amps available now that are ideal in this application. Many operators complain that they forget to turn off the wattmeter, draining the battery. A micro-power op-amp will help solve this problem. Texas Instruments make a beautiful series of CMOS op-amps that draw about 20 micro-amps from the battery. They also have low offset voltage, so zeroing shouldn't be a big problem. They are all single supply, rail-to-rail output, and have common mode range below ground - perfect for this application.

TLC271 single op-amp has a "bias select" pin 8 which should be tied to the +ve supply rail for low-power. TLC25L2C dual op-amp pin compatible with other standard duals, but very low power (30 ua total supply current) TLC27L2C dual op-amp similar to above.

One of these duals could easily be used to replace both op-amps in W7EL's circuit, making a very compact wattmeter that can extend battery use up to its shelf life.

Glen Leinweber VE3DNL leinwebe@mcmail.mcmaster.ca

[end of quoted message]

On page 21 of the W7EL article (Feb 1990 QST), Roy Lewallen said that an important consideration of the op amp following the diode detector in his circuit is having a very low input-bias current, and that "operational amplifiers that have input-bias currents of only a few picoamperes--more than adequate for this application--are readily available." I haven't had the chance to check out any of these TLC op amp in the data books, but I'm sure one of the engineers at work has the books. They could be worth looking into.

73 and Queue Our Pea DE WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From qrp-1@lehigh.edu Tue May 30 05:50:47 1995
Message-Id: <9505300544.AA08284@deneb.csustan.edu>
From: dh@deneb.csustan.edu (Doug Hendricks)
Subject: Non Hootowl Sprint Rpt.
Date: Tue, 30 May 1995 01:50:47 EDT

Ahh, Memorial Day weekend, always one of my favorites. 3 days off, and an ARCI 4 hour sprint contest, which are my favorites. The week before, I was busy making all kinds of plans. Let's see Friday evening after work I'll start the W9GR Filter that I bought at Dayton. Should be able to finish it up and then test out the antennas on Saturday. Sunday is the day of the contest, but it doesn't start until 8PM local time, so I will have all day to get ready for Field Day.

Vern Wright, W6MMA and I are going to operate the 20 and 75 meter SSB position at the Zuni Loop this year. I told Vern that we would need a cabin

type tent, he said that he would take care of it. I would have the responsibility of the operating table, and one of the neat things I have discovered at Zuni, a floor for the tent. That was to be the project for Sunday.

Fred Turpin, who is one of the Zuni founders, has a floor that he puts in his tent. It is great. It makes a neat surface to sit the operating table on, and your chair doesn't fall over all the time from sinking into the ground, plus, the tent floor is not damaged. How does Fred do it? He uses plywood that is cut into 2 x 4 foot sheets, and he lays them down, seals the seams with duct tape, and voila, instant floor. I went to Home Club and picked up a 4 x 8 sheet of wafer board. Only 8 bucks for the 3/8's thick sheets. It was a simple matter of making a couple of cuts when I got home, and that was ready to go.

We would also need an operating table and I came up with an idea that would kill a couple of birds with one swift shot. I would make a small portable table that was 2 x 4 feet. It would be made out of 3/4" plywood with 1 x 2 strips of pine around the bottom side to reinforce it. The legs would be pieces of 1/2" pipe that would screw in to a 1/2" pipe flange that was in each corner of the table. It was easy to take down, light, and very portable. While I was at it, I would make two, and Jim Cates and I would have tables for our next venture into the swap meet arena. The tables are such a great idea, that I might write an article for QRPP, complete with diagrams. Hey this will be a great weekend.

Thursday night my wife, JoAnne asked me a simple question. "What do you have planned for this weekend?"

I started to regale her with my plans, but before I could get the words out, she stifled my reply with the following. "Nothing I hope, because I have some things that need to be done around the house, and YOU promised to do them in exchange for getting to go to Dayton and play radio with the boys."

Oh no, Murphy was here, and there was no way out of this one. She was right, I did make the promise, but gosh, what is a guy to do when negotiating for the right to make a trip to Ham Mecca? "Ok dear, what do you need done?" Maybe I could be lucky and get it all done on Saturday. That would still give me Sunday and Monday for my stuff.

Then she confronted me. Guys, if you have ever heard me speak about QRP, you know that I always talk about the Momma Factor of ham radio spending. The Momma Factor works like this. In today's economy, you can buy anything you want for ham radio that costs less than \$99 and you don't have to even tell Momma about it. But, when you go over \$99 and up to \$199 for something, you have to ask Momma if the household budget can stand it. Never mind that the money is coming out of your rat hole, your wife still must be consulted on purchases of that magnitude. Now here comes the crunch. If you spend

more than \$199 on anything to do with ham radio, you not only have to ask Momma, you gotta get down on your knees and beg, cajole, and convince her that it is a dire necessity for your mental well being. If you are successful in your endeavors, there will be consequences, and dire ones at that. When you spend more than \$199 on ham radio, you will have to have some bucks in the old rat hole. Why? Because whatever you spend on yourself, plan on spending as much or more on your wife. That is the way that the Momma Factor works!

But, I digress. My wife reminded me of all the money that I spent at Dayton and it was more than \$199. So, we went to Fresno, stopped at Home Club, and picked up all the material for a new parquet wood floor in the kitchen. All of those packages of flooring, glue, trowels, stickum stuff, and an instruction book. I started Saturday by getting the supplies. And figured that I would get an early start on the job. I would do the preparation Saturday night, so that I could get up early Sunday morning, finish the job by 4 or 5 and still make the contest. WRONGGGG!!!!!!!!!!!!!! As you can tell, I don't put parquet floors in every day. It is not a simple job. I spent all day Sunday, until 10:00 PM on my hands and knees. By 10 I was so sore that I could hardly move. I crawled to my bed and then finally made it to the shower. No way was I able to operate a contest.

Monday morning. 7 AM, my wife is calling me. Time to get up and finish the job. I worked at it all day and finally finished at 6:00 tonight. I figured I might as well make the best of it. "Honey, you know, I wasn't too keen on the idea at first, but this floor really looks nice, now that it is done. You deserve it too, for being so nice to let me go to Dayton every year. (I was planting the seed guys!!)"

What is that they say about the best layed plans of mice and men? "Oh, we aren't done." she grinned and then added, "Next weekend we'll do the hallways."

Guys, I paid for my trip to Dayton this weekend. That is why you won't see a KI6DS report on the Hootowl Sprint. 72, Doug, KI6DS

From qrp-1@lehigh.edu Mon May 29 16:33:40 1995
Message-Id: <1995May29.115453.28229@wb3ffv.ampr.org>
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re problems with WM1 wattmeter
Date: Mon, 29 May 1995 12:33:40 EDT

In a recent posting, Jim, KG0PP (ejim@aol.com) asked for help with his OHR WM-1 meter--

>With no signal, the meter reads 1/4 scale at the 10w position, about

>1/2 scale in the 1w position and over full scale in the 100mw
>position. This is with no signal attached.

I haven't seen a schematic of the unit, but when I talked with Dick of OHR on the phone a couple years back he mentioned that the unit was essentially a mix of two devices. One is the W7EL QRP wattmeter in the Feb 1990 QST, page 19 et al, "A Simple and Accurate QRP Directional Wattmeter". (See also Hints & Kinks in the same issue for info on making a scale for the meter.) The other is the Stockton wattmeter by David Stockton, GM4ZNX, "A Bi-Directional Inline Wattmeter", from SPRAT #61, Winter 89/90 (which had the callsign wrong).

Dick used the directional coupler from the Stockton design (which is just a simple 4 port hybrid using a pair of toroids and a couple pieces of coax), coupled with the metering circuitry of the W7EL. The main reason for using the Stockton coupler was the ease of construction in a kit, compared to the W7EL coupler, which involved 3 toroids and a microstrip on a piece of PCB material.

With that in mind, here's an item I had in the Idea Exchange in the Oct 1993 issue of the QRP Quarterly--

A FIX FOR THE W7EL QRP WATTMETER

>From me, WA8MCQ--The February 1990 issue of QST contained an excellent QRP wattmeter article by Roy Lewallen, and included some really good information on behavior of diode detectors at low signal levels. The wattmeter itself is a real jewel, with full scale ranges of 10, 1 and 0.1 watts, and we no longer have to lust after the fabled and unobtainable Welz RP-120's (which had a low range of 200 milliwatts full scale). At the very end of the article he said that some units might exhibit a small problem, and he mentioned a fix for it. Mine had the problem, worse than his worst-case figure, and the fix works great.

Even after repeated alignments, my meter indicated a small amount of power with no signal connected to it. It could be seen on the top two ranges, and became objectionable on the 100 milliwatt range. Roy said the meter could read upscale by as much as 2%; mine was well over 5%, which reduced the accuracy a good deal. The circuit uses an "unbalanced" op amp, and the cure is quite simple. As Roy suggested in the article, I added a 100K trimmer pot between pins 1 and 5 of the CA3160 IC [the first op amp past the directional coupler] and grounded the wiper. These two pins are not shown in the schematic, but they are the "offset adjust" inputs.

Before turning it on, set the meter to zero with the adjustment screw, if it has one. With power on, sensitivity turned all the way up and no signals connected, set the meter to the lowest range. If the meter deflects upscale a bit, you have the problem. If it's too much to suit you, add the trimmer pot, and adjust it for zero on the meter. Don't go too far, though; if you keep on cranking it the meter will not go below zero. Set it so it just hits zero and then stop. If you go further, you will affect the calibration. My only regret is that I cursed this little glitch for a couple years before I reread the article and noticed there was something I could do about it.

--DE WA8MCQ

[end of Idea Exchange item]

The problem reported by Jim sounds identical to the one I experienced, although to a much greater extent. I can't verify that the OHR uses precisely the same circuitry as the W7EL, nor do I know if he uses the same CA3160 op amp that W7EL used, but the basic principle is probably applicable and could help.

73 and Queue Our Pea DE WA8MCQ

[note to QRP journal editors--you can use this in your publications if you want]

--

Mike Czuhaiewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhaiewski@hambbs.wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From qrp-1@lehigh.edu Mon May 29 22:48:45 1995
Message-Id: <199505292247.PAA18295@mailhost.primenet.com>
From: aa7qy@primenet.com (Roger Hightower)
Subject: Re: Re problems with WM1 wattmeter
Date: Mon, 29 May 1995 18:48:45 EDT

I should have copied the list on this one. Reposted per Mike's suggestion.

>To: Mike.Czuhaiewski@hambbs.wb3ffv.ampr.org
>From: aa7qy@primenet.com (Roger Hightower)
>Subject: Re: Re problems with WM1 wattmeter
>
>>In a recent posting, Jim, KG0PP (ejim@aol.com) asked for help with

>>his OHR WM-1 meter--
>
>>The problem reported by Jim sounds identical to the one I
>>experienced, although to a much greater extent. I can't verify that
>>the OHR uses precisely the same circuitry as the W7EL, nor do I know
>>if he uses the same CA3160 op amp that W7EL used, but the basic
>>principle is probably applicable and could help.
>
>Mike, if the Test Loop is cut instead of JP1 after calibration, it will
>cause Jim's problem. The fix is simple....reinstall the test loop and
>then realign, then cut JP1.
>
>73, de Roger AA7QY
>
aa7qy@primenet.com rhigh@aztec.asu.edu Ham Radio: AA7QY@KC7Y.AZ.USA.NA

From qrp-1@lehigh.edu Mon May 29 18:18:51 1995
Message-Id: <199505291814.0AA21708@brutus.bright.net>
From: "Bill Kelsey - N8ET - Kanga US" <kanga@brutus.bright.net>
Subject: Sunlogic Systems Kits available from Kanga US
Date: Mon, 29 May 1995 14:18:51 EDT

I have been having trouble with my mail program, tcp/ip, machine names, and a bunch of other things the past week and was not able to jump in when I saw the discussion about charger controllers from Mike Bryce...

I have them available....

73 - Bill Kelsey - N8ET
Kanga US
kanga@bright.net
419-423-4604
[HTTP://ncc1701-d.cc.nd.edu/kanga/](http://ncc1701-d.cc.nd.edu/kanga/)

From qrp-1@lehigh.edu Mon May 29 05:53:36 1995
Message-Id: <9505290552.AA09030@cybernetics.net>
From: ab4el@cybernetics.net (Stephen Modena)
Subject: Unbalanced feedline ... choke it
Date: Mon, 29 May 1995 01:53:36 EDT

> From: Glen Leinweber <leinwebe@mcmail.CIS.McMaster.CA>
> Subject: Unbalanced feedline
> Date: Sun, 28 May 1995 14:33:50 EDT
>
> Need some help gang,
> Just blew up my good stereo with my NORCAL 40. Amazing that
> a few watts going thru a supposedly balanced feedline could feed
> enough power into the speaker leads to blast both audio power amps.

OK...to avoid repeating that again...you should:

1) make sure the speaker leads are as short as feasible...
and not 30 ft of wire coiled up "for future use."

2) choke those leads: Amidon 1 KW Balun Kit for each
pair of leads...contains core and wire needed to
choke any RF from 1.8 to 30 MHz

> Here's the setup:
> Norcal feeding a T-type low-pass (ungrounded) tuner, a
> current balun, 300 ohm transmitting type feedline to a centre-fed
> antenna. The antenna has about 48 ft. one side, and 52 ft. on the
> other.

Ah yes, one can operate on 40 meters that way. Few antennas are
actually "balanced" in practise...but that off center feed guarantees
no-balance. Kinda follows the Carolina Windom notion...and they are
notorious for currents reaching back into the shack.

At least you have a current balun...but fail to say what it is...
so difficult to say whether it is effective.

> Can't get my brain around this one: does an unbalanced
> antenna guarantee that the feedline will be unbalanced too? (There's
> no balun at the feedpoint). With 300 ohm twinlead, do I have to
> worry about maintaining balance at both ends? (baluns at antenna
> feedpoint as well as at the tuner) This sounds like too much stuff
> between rig and antenna. I'm already QRP. Simpler perhaps to lop
> off four feet from the longer element to give equal lengths.

I guess I'm wondering why each arm of your antenna is not 33 feet.
Huh? :^)

As to the matter of baluns at the feed point and baluns at the
transmitter...and unbalanced antennas making unbalanced feeds..
may I recommend the following article:

BALUNS: WHAT THEY DO AND HOW THEY DO IT
by Roy Lewallen, W7EL
(ARRL) Antenna Compendium #1, pp 157-163

Everything you need to know about your situation is contained in that article...theory and results of a simple experimental setup that simulates your antenna situation.

--

73/Steve/AB4EL ab4el@Cybernetics.NET in Raleigh, NC 35.81245N, 78.65849W